The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of fabricating a thermoset article from a mold, comprising the steps of:

providing a mold having at least one face surface;

forming a metal oxide coating on at least one face surface;

providing an ionic release agent at the metal oxide surface;

providing the acid or base conjugate of the release agent at the metal oxide surface;

providing a thermoset resin mixture in the mold; and

curing the resin mixture in the mold.

2. The method of Claim 1, wherein the mold is a glass substrate comprising silica.

3. The method of Claim 1, wherein the metal oxide is selected from the group consisting of transition metal oxides and ceramic oxides.

4. The method of Claim 3, wherein the metal oxide is selected from the group consisting of TiO_2, TiO, Ti_2O_3, Ti_3O_5, SnO, SnO_2, Al_2O_3, Al_2O, AlO, ZrO_2, Ta_2O_5, HfO_2, Y_2O_3, Nb_2O_4, Nb_2O_5, NiO, MgO, MgO_2, Fe_2O_3, Fe_3O_4, FeOOH, $Fe(OH)_2$, Cr_2O_3, CrO_2 and CrO_3 or any combination thereof.

5. The method of Claim 4, wherein the metal oxide is Al_2O_3.

6. The method of Claim 4, wherein the metal oxide is NiO.

7. The method of Claim 4, wherein the metal oxide is MgO.

8. The method of Claim 4, wherein the metal oxide is SnO_2.

9. The method of Claim 1, wherein the metal oxide coating is a thin metal oxide layer.

10. The method of Claim 9, wherein the metal oxide is deposited on the mold by physical vapor deposition, chemical vapor deposition, or the like.

11. The method of Claim 10, wherein the thickness of the thin metal oxide is about 1 to about 2000 nm

12. The method of Claim 1, wherein the metal oxide coating is formed by O_2 plasma or atmospheric oxidation.

13. The method of Claim 1, wherein the metal oxide exhibits an isoelectric point greater than about 2.

14. The method of Claim 13, wherein the metal oxide exhibits an isoelectric point greater than or about equal to 4.

15. The method of Claim 14, wherein the metal oxide exhibits an isoelectric point greater than or about equal to 8.

16. The method of Claim 15, wherein the metal oxide exhibits an isoelectric point greater than or about equal to 10

17. The method of Claim 16, wherein the metal oxide exhibits an isoelectric point less than or about equal to 12.

18. The method of Claim 1, wherein the metal oxide exhibits an isoelectric point from about 7 to about 12.5.

19. The method of Claim 18, wherein the metal oxide is selected from the group consisting of Fe_2O_3, Fe_3O_4, FeOOH, and $Fe(OH)_2$ or any combination thereof.

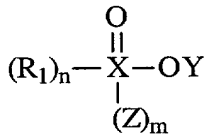
20. The method of Claim 1, wherein the metal oxide exhibits an isoelectric point from about 6 to about 7.

21. The method of Claim 20, wherein the metal oxide is selected from the group consisting of CrO_3, CrO_2, and Cr_2O_3 or any combination thereof.

22. The method of Claim 1 wherein the release agent is used as an internal release agent.

23. The method of Claim 1, wherein the release agent is an anionic compound.

24. The method of Claim 1, wherein the release agent is a compound with the following general formula:



wherein,

Y is any element or combination of elements that forms an acid conjugate upon dissociation,

X is any element that facilitates the dissociation and formation of a base conjugate with reduced chemical interaction with the resin mixture,

R_1 is any combination of elements that facilitates solubility within the resin mixture and provides a non-reactive barrier film,

n is either 1 or 2,

Z is either O or OH,

m is either 0 or 1.

25. The method of Claim 24, wherein,

Y is H, NH_4, or NR_4, wherein R is any aliphatic hydrocarbon chain,

X is P, S, or C,

R_1 is any alkyl, alkyl ester, or fluorinated alkyl esters, R_1 having from 8 to 20 carbon units,

n is 1 when X is C or S or when X is P and the compound describes phosphonic acid or di-acid phosphate esters, n is 2 when X is P and the compound describes phosphinic acid or mono-acid phosphate esters,

Z is O when X is S and the compound describes sulfonic acids, Z is OH when X is P and the compound describes di-acid phosphate esters or phosphonic acids, and m is 1,

m is 0 when X is C or X is P and the compound describes mono-acid phosphates or phosphinic acid.

26. The method of Claim 1, wherein the release agent is an ester or acid selected from the group consisting of phosphates, phosphonates, phosphonites, sulfates, sulfites and carboxylates.

27. The method of Claim 26, wherein the release agent is selected from the group consisting of monoacid phosphate esters, diacid phosphate esters, fluorinated monoacid phosphate esters, fluorinated diacid phosphate esters, perfluorododecanoic acid, octyl phosphonic acid, and perfluorinated alkyl phosphonic acid.

28. The method of Claim 1, wherein the release agent is used as an external release agent.

29. The method of Claim 1, wherein the resin mixture comprises an epoxy or an isocyanate.

30. The method of Claim 1, wherein the resin mixture comprises a compound selected from the group consisting of isophorone diisocyanate, 1,6- hexamethylene diisocyanate, xylylene diisocyanate, bis (4-isocyanatocyclohexyl) methane, cyclohexane diisocyanates, toluene diisocyanate, tetramethylxylyene diisocyanate methylene bis(cyclohexylisocyanate), bis 3,4 epoxy cyclohexylmethyl adipate, 3,4 epoxy cyclohexylmethyl-3'-cyclohexenylmethyl adipate and diallyl diglycol carbonate.

31. A plastic ophthalmic lens made by the method of Claim 1.

32. A plastic optical filter made by the method of Claim 1.

33. An optically engineered surface structure made by the method of Claim 1.

34. The structure of Claim 33 wherein the structure includes a refractive surface.

35. The structure of Claim 33 wherein the structure includes a diffractive surface.

36. The structure of Claim 33 wherein the structure includes a stochastic surface.

37. A reaction injection molding made by the method of Claim 1.

38. A method of using float glass having a SnO_2 enriched surface, wherein the method comprises:

providing an anionic release agent externally to the SnO_2 surface of the float glass.

39. The method of Claim 38, further comprising the step:

providing a mold formed from the float glass.

40. The method of Claim 38, further comprising the step:

providing a urethane resin in the mold and curing the resin.

41. The method of Claim 38, further comprising the step:

providing an epoxy resin in the mold and curing the resin.

42. A system for molding a thermoset, comprising:

a glass mold having a metal oxide surface,

an applicator apparatus for applying a mold release to the metal oxide surface, and

a washer apparatus for removing excess mold release from the metal oxide surface.

43. The system of Claim 42, wherein the mold comprises:

a first and a second planar member,

a gasket for separating the first and second member in spaced apart relationship to define a cavity bounded by the first and second member and the gasket.